

IN THE CLAIMS:

1. (Original) A powder batch comprising composite electrocatalyst particles, said electrocatalyst particles comprising a support phase and an active species phase dispersed on said support phase, wherein said support phase comprises primary support particles having an average size of from about 10 to about 100 nanometers, wherein the average cluster size of said active species phase is not greater than about 20 nanometers and wherein said electrocatalyst particles have a surface area of at least about 90 m²/g.
2. (Original) A powder batch as recited in Claim 1, wherein said active species phase has an average cluster size of from about 0.5 nanometers to about 5 nanometers.
3. (Original) A powder batch as recited in Claim 1, wherein at least about 50 percent of said active species phase has a cluster size of not greater than about 3 nanometers.
4. (Original) A powder batch as recited in Claim 1, wherein said active species phase comprises a metal.
5. (Original) A powder batch as recited in Claim 1, wherein said active species phase comprises a platinum group metal.
6. (Original) A powder batch as recited in Claim 1, wherein said active species phase comprises a metal oxide.
7. (Original) A powder batch as recited in Claim 1, wherein said active species phase comprises a transition metal oxide.
8. (Original) A powder batch as recited in Claim 1, wherein said active species phase comprises manganese oxide.
9. (Original) A powder batch as recited in Claim 1, wherein said electrocatalyst particles have a surface area of at least about 200 m²/g.
10. (Original) A powder batch as recited in Claim 1, wherein said primary support particles comprise carbon.
11. (Original) A powder batch as recited in Claim 1, wherein said primary support particles comprise graphitic carbon.
12. (Original) A powder batch as recited in Claim 1, wherein said electrocatalyst particles have an average particle size of not greater than about 10 μm.
13. (Original) A powder batch as recited in Claim 1, wherein said electrocatalyst particles have an average particle size of from about 1 μm to about 10 μm.
14. (Original) A powder batch as recited in Claim 1, wherein said electrocatalyst particles are substantially spherical.
15. (Original) A powder batch as recited in Claim 1, wherein said electrocatalyst particles comprise from about 20 to about 40 weight percent of said active species phase.

16. (Original) A powder batch as recited in Claim 1, wherein said electrocatalyst particles have a porosity of at least about 40 percent.

17. (Original) A powder batch of metal-carbon composite electrocatalyst particles, said electrocatalyst particles comprising a carbon support phase and a metal active species phase dispersed on said support phase, wherein said support phase comprises primary carbon particles having an average size of from about 20 to about 40 nanometers and wherein the average cluster size of said metallic active species phase is not greater than about 10 nanometers.

18. (Original) A powder batch as recited in Claim 17, wherein said metallic active species phase comprises a platinum group metal.

19. (Original) A powder batch as recited in Claim 17, wherein said metallic active species phase comprises platinum metal.

20. (Original) A powder batch as recited in Claim 17, wherein said active species phase comprises a metal alloy.

21. (Original) A powder batch as recited in Claim 17, wherein said electrocatalyst powders have a surface area of at least about 200 m²/g.

22. (Original) A powder batch as recited in Claim 17, wherein said electrocatalyst powders have a porosity of at least about 40 percent.

23. (Original) A powder batch as recited in Claim 17, wherein at least about 50 weight percent of said active species phase has a cluster size of not greater than about 3 nanometers.

Claims 24-46 (Cancelled).